



1) a)

Total mass = 16.5 tonnes			
Crate 3300kg	Crate 3300kg	Crate 3300kg	Fuel 6600kg

b)

Total Height of Mountain = 3.6km							
450m	450m	450m	450m	450m	450m	450m	450m

2) a) 9.17km

b) 6 buckets

3) 2.62m

1) The correct answer belongs to Jacob.

$$0.075l = 75ml$$

$$75ml \times 3 = 225ml$$

$$225ml + 1675ml = 1900ml$$

2) Bar model C best represents the problem as we know the total mass the jars is 0.9kg or 900g. The model shows that there is one pickle jar which has a mass of 250g and five jars of jam. We can work out that the jam jars have a total mass of $900g - 250g$ which is 650g. To find the mass of each jar, $650g \div 5 = 130g$. One jar has a mass of 130g.



1) 0.1l = Bottle D

0.9l = Bottle E

150ml = Bottle B

0.25l = Bottle A

775ml = Bottle C

2) a) Mass of one box: $2.35g \times 38 = 89.3g$

Mass of 30 boxes: 2.679kg

b) 5-6 kilograms: Least is 56 boxes and most is 67

1-2 kilograms: Least is 12 boxes and most is 22

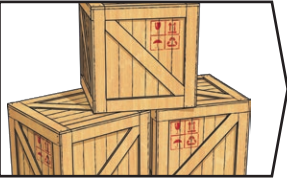




1) Use the bar models to help you to solve the following questions.


- a) A plane is loaded with three crates. Each crate has a mass of 3300kg. It is then filled with fuel. The mass of the fuel is twice the mass of a crate. What is the total mass of the cargo and fuel in tonnes?

Total mass = _____			
Crate _____	Crate _____	Crate _____	Fuel _____



- b) A climber has climbed $\frac{7}{8}$ of the way up a mountain and stops to rest 450m away from the summit. How high is the mountain in kilometres?

Total Height of Mountain = _____							
							450m



2) Solve the following questions, using a bar model to help when needed.

- a) I walk for 1650m, cycle for 5.4km and run for 2.12km. How far did I travel altogether? Give your answer in km.

- b) A fish tank contains 10500ml of water. A bucket holds 1.75l of water. How many buckets of water will I need in order to fill my fish tank?

3) Some children are measuring the lengths of different items in their classroom. What do the items measure altogether in metres?

- Bookshelf = 0.8m
- Exercise book = 30.5cm
- Pencil = 140mm
- Reading book = 12.5cm
- Chair = $1\frac{1}{4}$ m



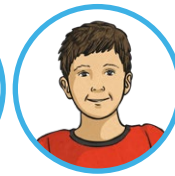
1) Three children record their answer to this problem.

The milk bottle holds 1900ml. I poured the same amount of milk into three cups and had 1675ml left in the bottle. How much milk is in each cup?

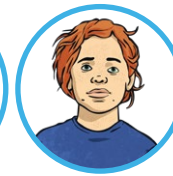
Which child has given the correct answer?
Explain how you know.



Jessica:
7.5l



Jacob:
0.075l

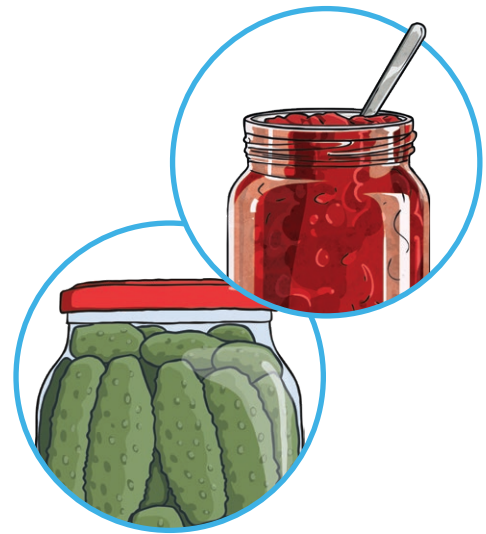
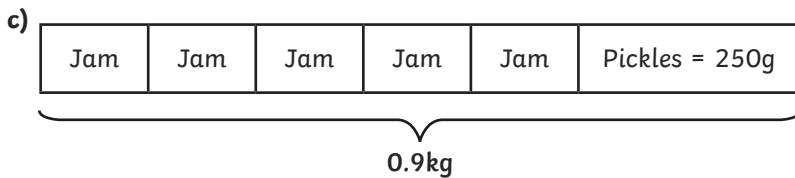
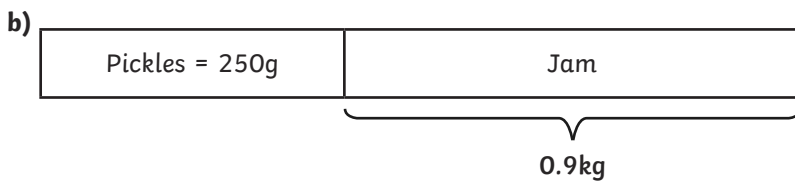
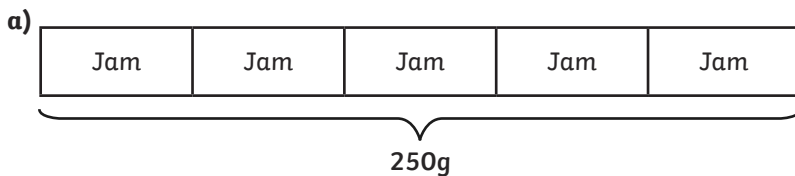


George:
0.75l



2) Which bar model best represents this problem? Solve the problem and explain your answer.


Five equally sized jars of jam and a 250g jar of pickles have a mass of 0.9kg altogether. Give the mass of one jar of jam.








1) Use the statements to match each volume of orange squash given below to each of the bottles.


Volumes:
 0.11l 0.25l
 0.9l 775ml
 150ml

C  Contains 0.025l more than $\frac{3}{4}$ l.

A  Contains more than bottle B but less than Bottle C.

D  Contains a lower volume of orange squash than Bottle B.

B  Contains between 0.1 and 0.2l.

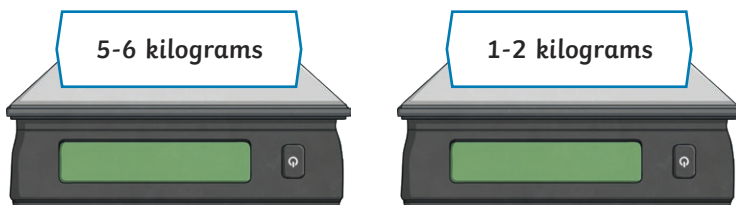
E  Contains more than bottle C.

2) a) A teacher is buying pencils for the school.

Each pencil has a mass of 2.35g.
 There are 38 pencils in each box.
 The teacher decides to buy 30 boxes of pencils for the school.

Give the total mass of the pencils she has bought, in kilograms.

b) In the factory that makes the pencils, each order for boxes of pencils is placed on a set of scales before it is sent out.



What is the most number of boxes and least number of boxes that could be on each set of scales?

Diving into Mastery



Calculate with Metric Measures

Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:



Diving



Deeper



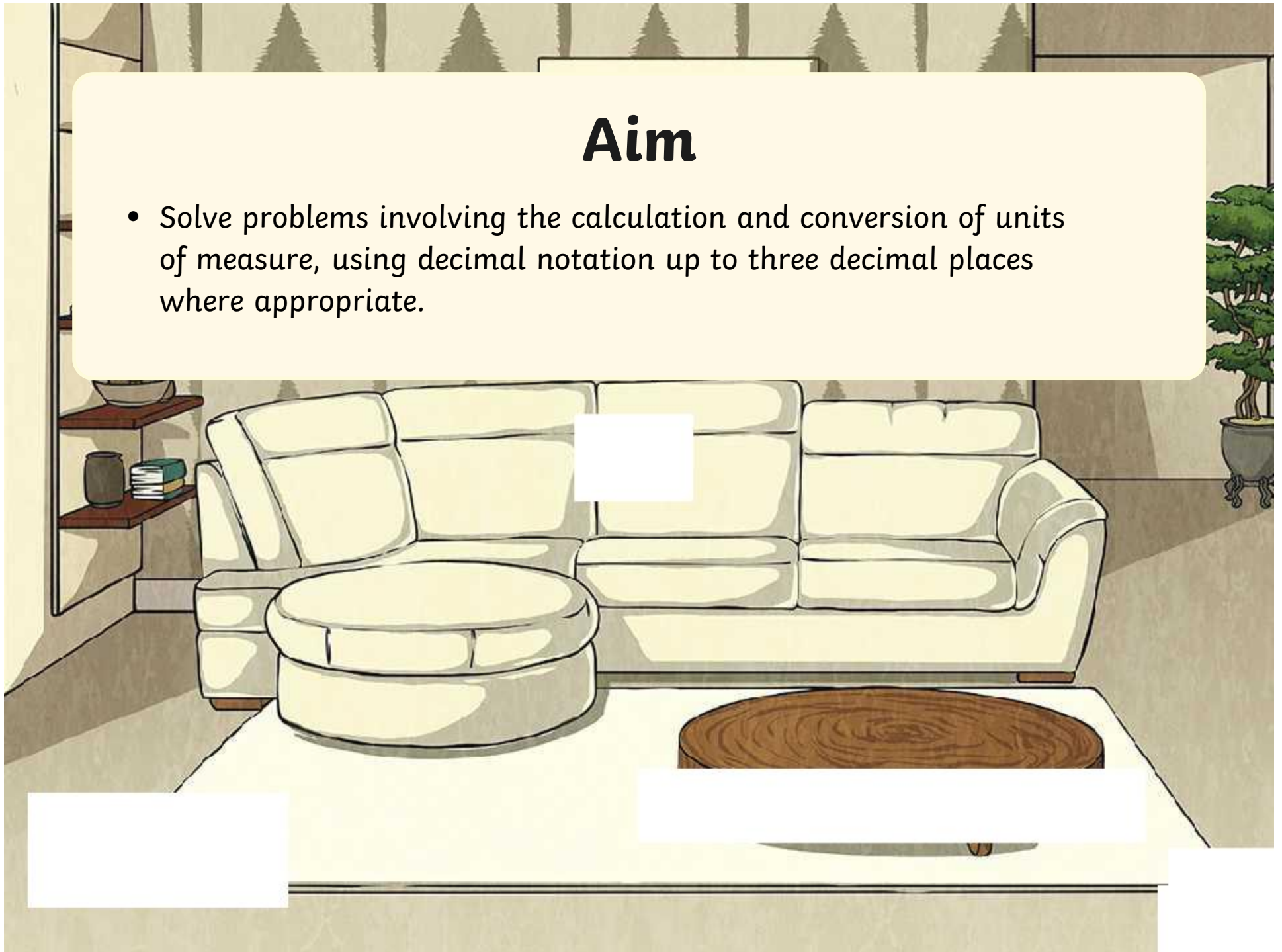
Deepest

These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

Aim

- Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.



Calculate with Metric Measures

Diving



Six 360ml cups are filled from a 2.3l flask of coffee. How much coffee is now left in the flask? Give your answer in litres.

Flask = 2.3l						
Cup = 360ml	Cup = 360ml	Cup = 360ml	Cup = 360ml	Cup = 360ml	Cup = 360ml	0.14l

How much is left?



Calculate with Metric Measures

Deeper



Finlay has a piece of string which measures 0.9m. He cuts off a piece measuring 15cm and then cuts the remaining string into three equal pieces. How long is each piece?

Three children record their answer to this problem:



11:58

Calculate with Metric Measures

Deepest



What is the total mass in kilograms of the contents of the rucksacks?

2.78kg

Mass of rucksack contents:

0.35kg = **Rucksack C**

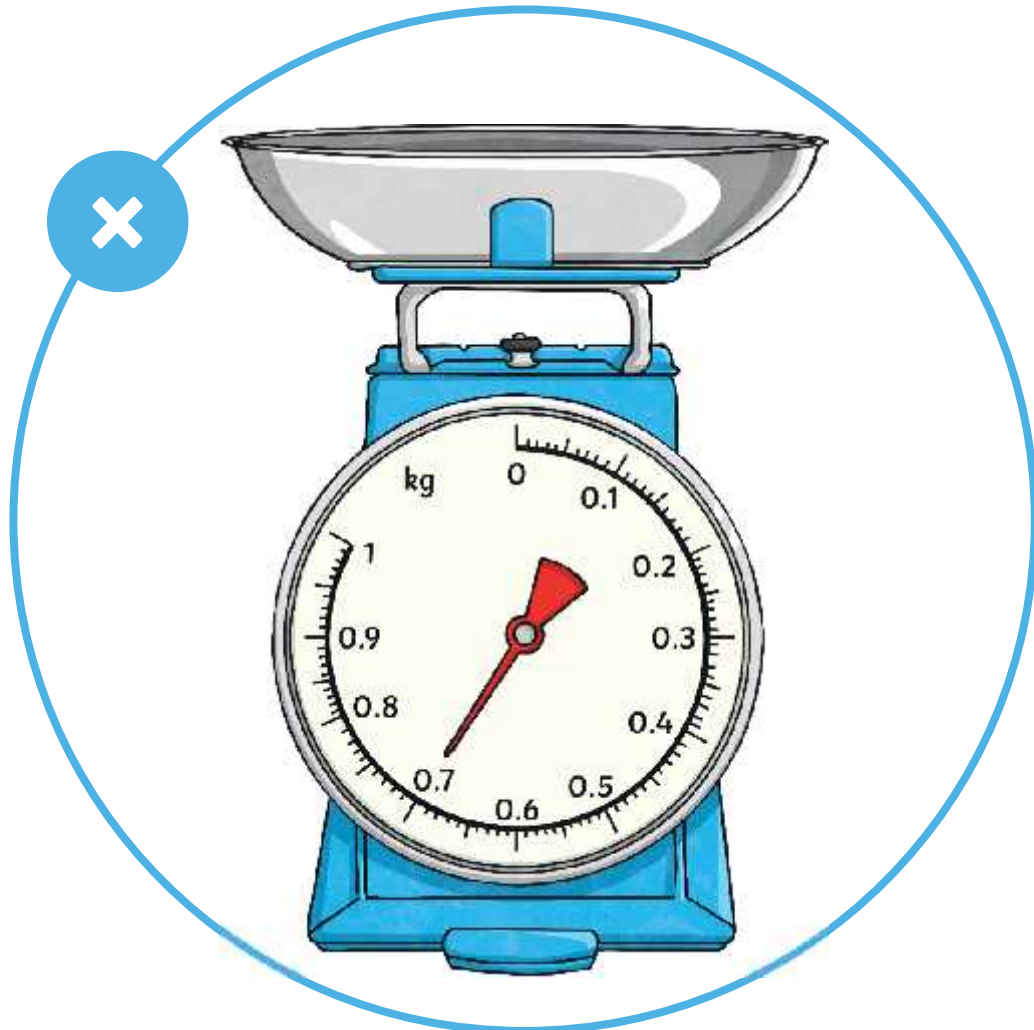
0.8kg = **Rucksack A**

80g = **Rucksack B**

0.7kg = **Rucksack E**

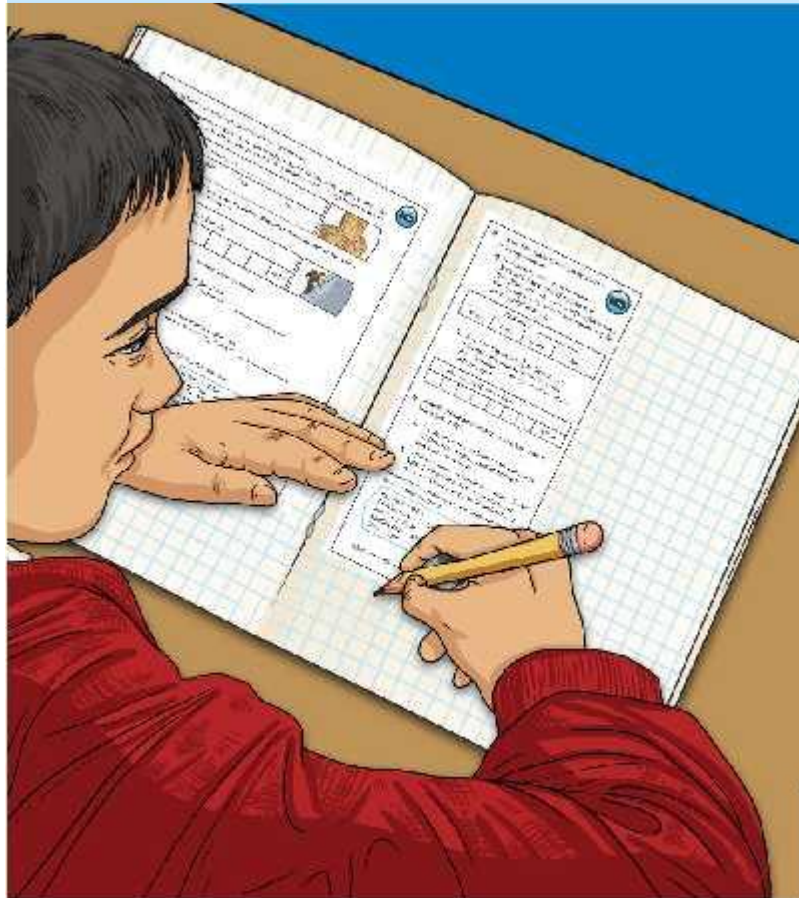
850g = **Rucksack D**

scale ▲



Calculate with Metric Measures

Dive in by completing your own activity!

A screenshot of a math worksheet titled 'Calculate with Metric Measures'. It features several word problems involving volume and length, along with diagrams and tables for student input.

30 The table below represents the volume of water in litres in a reservoir.

Year	Volume (litres)
2013	100
2014	120
2015	140

31 The table below shows the volume of water in litres in a reservoir for the first three years.

Year	Volume (litres)
2013	100
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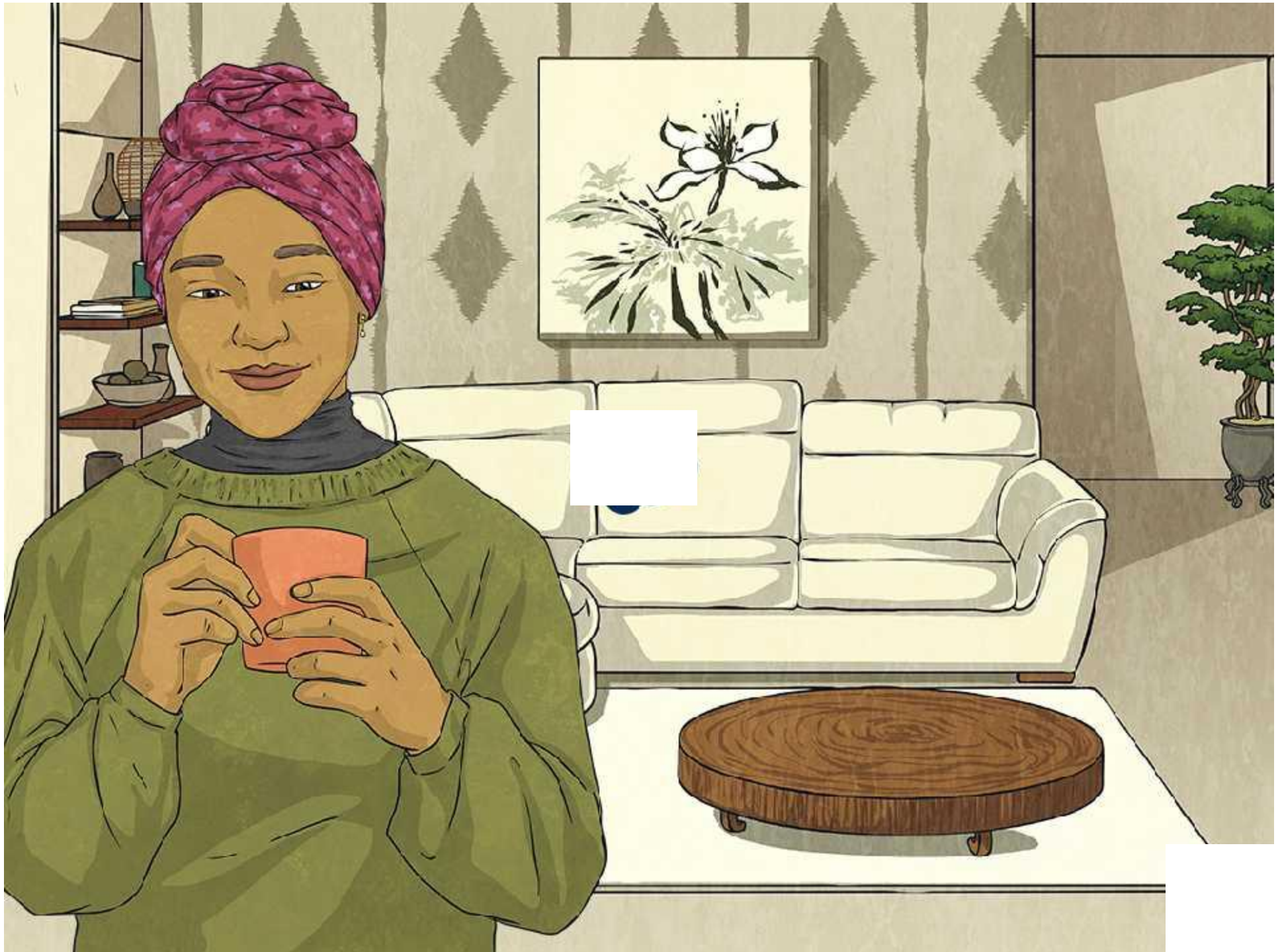
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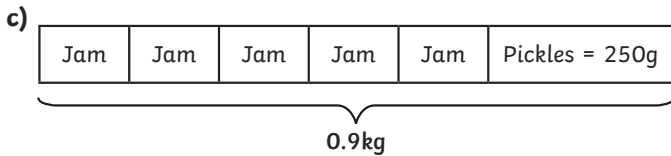
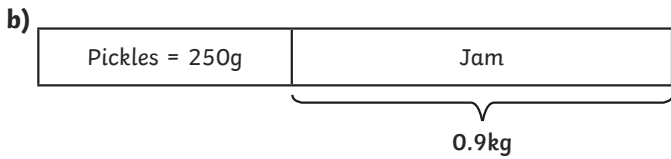
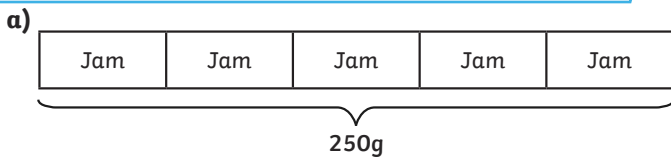
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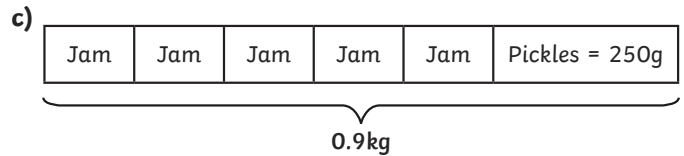
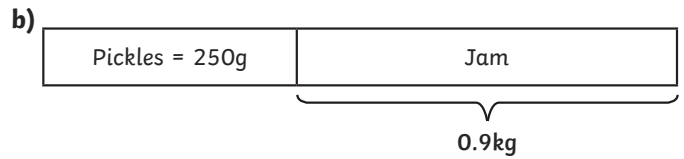
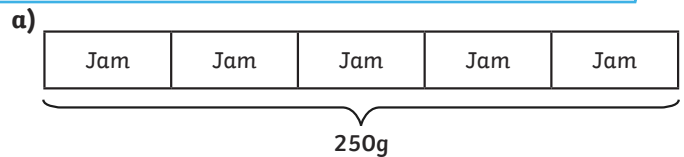
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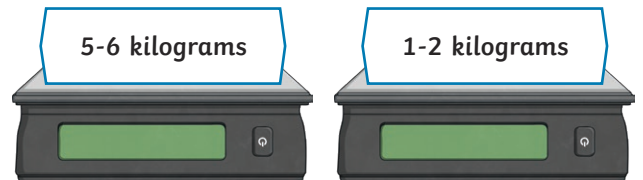
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